

1.(Cancelled)

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16.(Cancelled)

17.(Cancelled)

18.(Cancelled)

19.(Cancelled)

20.(Cancelled)

21.(Cancelled)

22.(Cancelled)

23.(Currently Amended) A system for compensating for distortion within an analog-to-digital converter, the system comprising:

a test signal generator that provides an analog test signal and a digitized test signal indicative of the analog test signal;

an analog-to-digital converter that selectively receives an input signal and the analog test signal and provides a digitized signal;

a compensation circuit that receives the digitized signal and filter coefficients, and provides a compensated digitized signal;

a test signal check device that receives and processes the compensated ~~digitized~~ signal to extract a sequence of output data;

a difference unit that receives the sequence of output data and the compensated digital signal and provides a difference signal indicative of the difference; and

a coefficient determination unit that receives the difference signal and the digitized signal and provides the filter coefficients.

24.(Currently Amended) A system for compensating for distortion within an analog-to-digital converter, the system comprising:

means for providing an analog test signal;

an analog-to-digital converter that selectively receives an input signal and the analog test signal and provides a digitized signal;

compensation means for receiving the digitized signal and adaptive filter coefficients, and for providing a compensated digitized signal;

means for receiving and processing the compensated ~~digitized~~ signal to extract a sequence of output data;

a difference unit that receives the sequence of output data and the compensated digital signal and provides a difference signal indicative of the difference; and

means responsive to the difference signal and the digitized signal for providing the filter coefficients.

25.(Currently Amended) A system for compensating for distortion within an analog-to-digital converter, the system comprising:

a test signal generator that provides an analog test signal;

an analog-to-digital converter that selectively receives an input signal and the analog test signal and provides a digitized signal;

compensation means for receiving the digitized signal and filter coefficients, and for providing a compensated digitized signal;

means for receiving and processing the compensated ~~digitized~~ signal to extract a sequence of output data;

a difference unit that receives the sequence of output data and the compensated digital signal and provides a difference signal indicative of the difference; and

means responsive to the difference signal and the digitized signal for providing the filter coefficients.